

### REMARKS

Claims 1-19 are pending in the subject application. Claims 1-19 are subject to a restriction and election requirement. Applicants have amended claims 1-3 to further define the present invention, e.g., to recite that the claimed protein has "an XIAP-binding activity,". Support for the amended claims is found throughout the specification and Examples section. For example, see page 10, lines 21 to 37 through to page 11, lines 1 to 29. No new matter is added by virtue of these amendments and their entry is respectfully requested.

As an initial matter, Applicants appreciate the Examiner's thorough examination of the subject application and request reconsideration of the Restriction Requirement based on the foregoing amendments and the following traversal and other remarks.

#### **Traverse to the Restriction Requirement:**

Applicants respectfully traverse the Restriction Requirement. It is noted that the present application was filed under Rule 371; thus, attention is directed to the PCT rules regarding "unity of invention". For instance, PCT Rule 13.2 stipulates that the requirement of unity of invention shall be fulfilled only when there is a technical relationship among the inventions involving one or more of the same or corresponding "special technical features". The expression "special technical features" is defined as those technical features that define a contribution which each of the inventions, considered as a whole, makes over the prior art.

The Examiner asserts that the above groups of inventions are not so linked as to form a single general inventive concept under PCT Rule 13.1. As support, the Examiner has cited Gasdaska *et al* (from PTO-1449) and alleges that the technical feature linking the inventions of Groups I-V does not constitute a "special technical feature" as defined by PCT Rule 13.2, since "it does not define a contribution over the prior art."

In accordance with the within amendment, the subject matter of claims 1-3 recites that the claimed protein has “an XIAP-binding activity.” In contrast, Gasdaska *et al.* do not teach an XIAP-binding activity of their enzyme. Thus, the above amendment distinguishes the thioredoxin reductase of the present invention from that of Gasdaska *et al.* Furthermore, currently amended claims share “a thioredoxin reductase having an XIAP-binding activity” as a “special technical feature,” which define a contribution over the Gasdaska reference.

**Traverse to the Election of Species Requirement:**

The Examiner has required an election of sequences from SEQ ID NOS: 1 or 3, and SEQ ID NOS: 2 or 4. The Examiner alleges that the thioredoxin reductase of SEQ ID NOS: 2 and 4 lack the same or corresponding special technical feature because the two polypeptides have “different structure, substrate specificity, physical and chemical properties, and utilities”. The Examiner further alleges that “the DNA of SEQ ID NOS: 2 and 3 lack the same or corresponding special technical feature because the two polynucleotides encode polypeptides have different structure, substrate specificity, physical and chemical properties, and utilities”.

In response, Applicants respectfully submit that the thioredoxin reductases of the present invention, namely TxRII $\alpha$  (SEQ ID NO: 2, encoded by DNA of SEQ ID NO: 1) and TxRII $\beta$  (SEQ ID NO: 4, encoded by DNA of SEQ ID NO: 3), do share common structure and function. First of all, these two proteins share an identical structure in the second and the following sixteen exons. The first exon of TxRII $\alpha$  is Exon 1 (SEQ ID NO: 18), and the first exon of TxRII $\beta$  is Exon 2 (SEQ ID NO: 19). The second and the following sixteen exons of both are identical as identified by SEQ ID NOS: 20-36. The support for this is found in the last paragraph of page 6, and elsewhere in the specification.


In addition, in the currently amended claims, attached as an amendment hereto, both TxRII $\alpha$  and TxRII $\beta$  have “an XIAP-binding activity” as a common function. This XIAP-binding activity serves as a “special technical feature” shared by these two proteins, and hence, the requirement of “unity of invention” is fulfilled.

Nonetheless, to be fully responsive to the Examiner's Restriction Requirement, applicants respectfully elect, with traverse, Group I directed Claims 1-5, drawn to a thioredoxin reductase and species election SEQ ID NOS 1 and 2.

The present election is made solely to comply with the Office Action and should not be construed as a surrender of any subject matter in the application. The right to file divisional applications on the non-elected claims and species of the invention is reserved.

Entry of the within amendment in addition to early consideration and allowance of the application are earnestly solicited.

Respectfully submitted,



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